State Forest Management Planning/ BNR

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State of Connecticut
Department of Environmental Protection
Amey W. Marrella, Commissioner

Project Scope

▶ ". . . to improve the way DEP Forestry collects, stores and transfers data; produces and reviews 10 year natural resource management plans; and implements forest cutting plans."

Opportunity for Improvement

- Isolated data
- Takes too long to complete management plans
- Communication

Who Is Our Customer ?

Healthy Forest Ecosystem and People

What does the customer want ?

Healthy , Diverse Ecosystem

Diverse Wildlife Habitat

Wood Products

Clean Air , Clean Water

Variety of Recreational Opportunities

Current State

- State Forest cover 170,000 acres
- 50,000 acres covered under 10 year plans
- 20,000 acres have expired 10 year plans
- 100,000 acres no 10 year plans
- Underutilized electronic mapping capabilities
- No central database
- Inventory techniques variable and antiquated

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Visitor Feedback

▸ Dr. Jeff Ward : Recommended use of electronic data collection, storage and analysis.

▸ Howie Sternberg : Showed us future GIS database capabilities.

▸ Naomi Davidson :Uploading documents to web can be readily accomplished.

Future State

▸ 170,000 acres covered under a 10 year management plan

▸ Improved efficiency inventorying using advanced technology (e.g., Tough Book, advanced GPS, NED-Lite)

▸ Increase the number of approved and implemented cutting plans

▸ All electronic mapping and transfer of data

1 MONTH Project Goals

Uconn staff writes metadata for statewide database

Meeting b/n DEP forestry and DEP GIS to finalize dataset before launching on servers, name data steward

Apply to OIM for database creation
Use Hartford seasonal to type hardcopies of management plans
Submit purchase request for 6 trimble untis and accessories

Apply for GIS training for SLM Foresters

Investigate the possibility of obtaining un-used Hartford computers which are newer and more efficient, to the Field.

6 MONTH GOALS

Develop SOP for data collection and Trimble geo-xt

Data steward training

SLM Staff Meeting to prioritize inventory schedule for management plans

Obtain Trimble Geo-xt field units and receive training for use

All stand maps are available to Enviro-data viewer

Forestry Management Plans availble online

SLM Forester begins employing new techniques

Improve Connectivity and Data Transfer to forestry field offices

Explore Options to Use Existing DEP staff to assist in data collection

12 MONTH GOALS

Obtain 4-wheel drive vehicles for state lands foresters.

Develop College Internship Program

Train Field Staff on GIS

Management Plan Test Cases (Model)
1. Paugussett State Forest
2. Paugnut State Forest
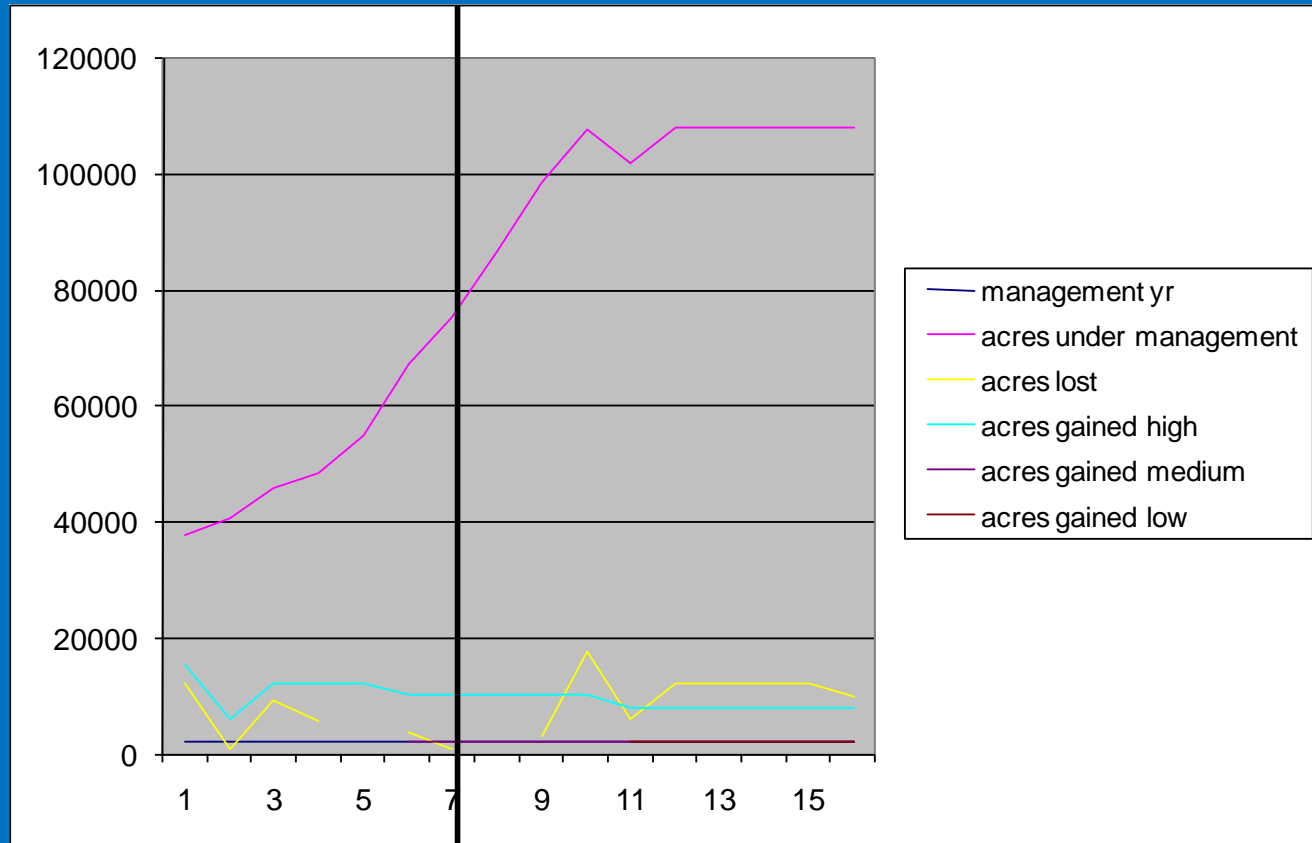3. Cockaponset State Forest

* KEY PERFORMANCE INDICATORS *

Type of Process	Reduced Time/ Steps
Office Recon	3 Steps to 2 Steps, days to hours, employ GIS
Field Inventory	5 Steps to 2 Steps, 1000 acres to 2000 acres per year****
Data Process	7 Steps to 4 Steps , months to days, populate database with 12,000 acres per year
Plan Writing	62 % less time for review
Mgt. Plan Review	16 Steps to 13 Steps
Implementation	50 % less time for review

New Database (example)

FOREST	FORESTER	BLOCKS	BLOCKName	ACRES	Total	PRIORITY	PLAN TERM	PLAN	IMPLEMENTATION	EXPIRES	Total ACRES(Gues
Algonquin	FT	d0005_01	Algonquin	623	1089	Low	20	None	No		2,545
Algonquin	FT	d0005_02	South	467		Low	20	None	No		
American Legion	JM	d0006_01	American Legion	1047	1047	High	10	Expired	Yes	2007	789
Camp Columbia	DI	d0565_01	Camp Columbia	599	599	High	10	Active	Yes	2018	599
Centennial A	JM			7,500	7,500	High	10	None	No		7,500
Centennial B	JM			7,500	7,500	High	10	Draft	No		7,500
Cockaponset	EG	d0092_01	Macomas	246	16456	High	10	None	Yes		16,312
Cockaponset	EG	d0092_02	CandleWood	3390		High	10	Active	Yes	2012	
Cockaponset	EG	d0092_03	Turkey Hill	5699		High	10	Expired	Yes	2009	
Cockaponset	EG	d0092_04	Ruth Hill	1558		High	10	None	Yes		
Cockaponset	EG	d0092_05	Killingworth	1553		High	10	Active	Yes	2012	
Cockaponset	EG	d0092_06	Winthrop	2099		High	10	Active	Yes	2015	
Cockaponset	EG	d0092_07	Cedar Swamp	1532		High	10	Active	Yes	2015	
Cockaponset	EG	d0092_08	Mike Pochan	378		High	10	None	Yes		
Enders	FT	d0144_01	Enders	1953	1953	Medium	10	Active	Yes		2,097
Goodwin	NONE	d0243_01	Goodwin	2288	2288	High	10	Expired	No	2006	2,003

Priority Productivity Timeline
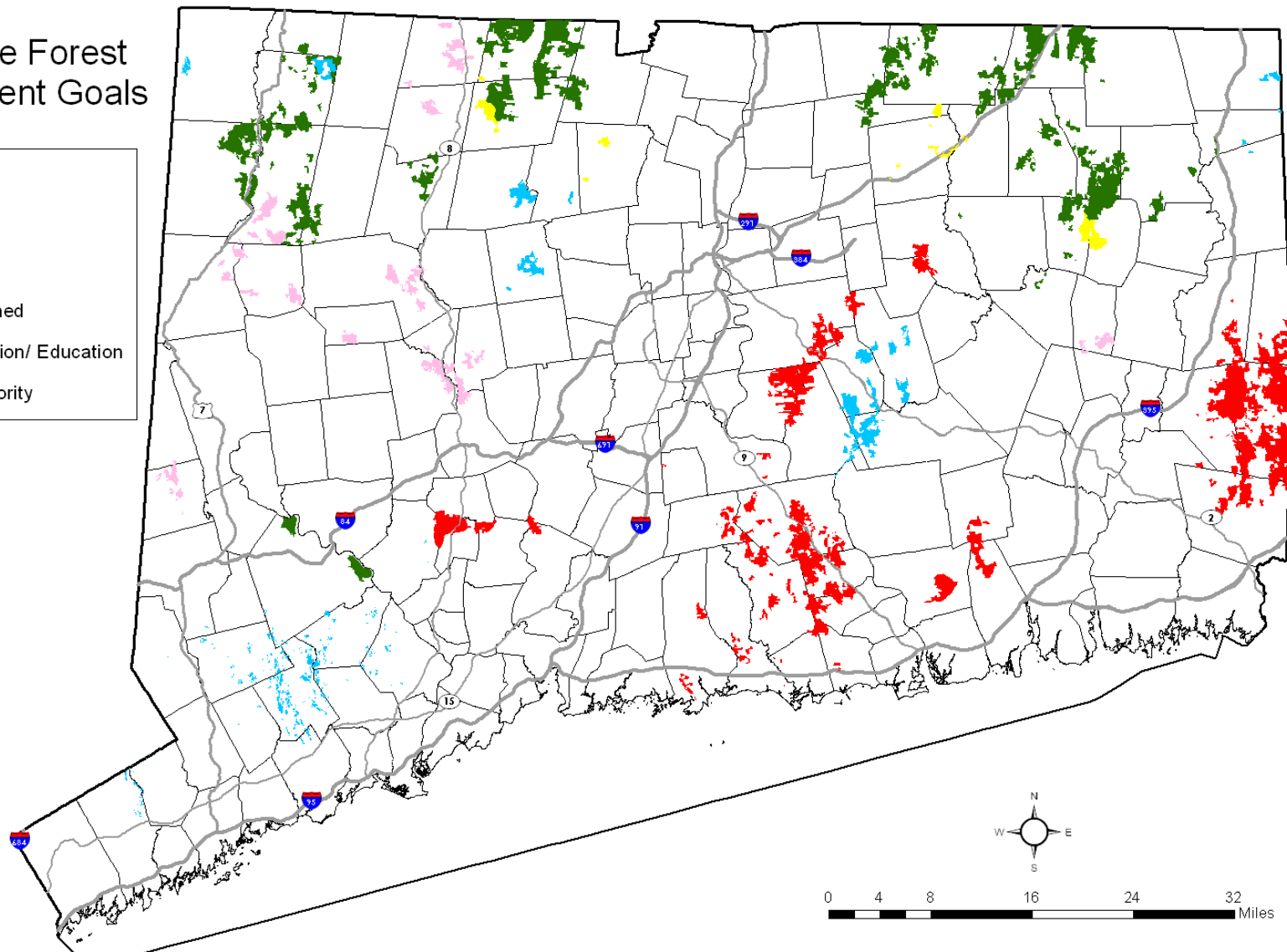
DEP State Forest
Management Goals

Legend
Timber
Wildlife
Watershed
Recreation/ Education
Low Priority

Investments

6 Trimble Geo XT Units with Accessories

GIS Training for 7 Foresters

4-wheel drive vehicles

Improved Computers and Printers for Field Foresters (Hartford surplus)

External Harddrives to hold maps and data

20-factor prisims (6)

Summary of Kaizen Improvements

Numbers represent the number of 7 hour days needed for each phase of the management plan drafting process in order to complete management plans for all 170,000 acres of state forest.

	BEFORE	AFTER	Percent Reduction
Office Recon	170	20	88%
Inventory*	1700	1133	33%
Data Entry	121	8	93%
Data Summary	340	85	75%
Data Process	850	170	80%
Plan Writing	540	500	7%
Plan Review	182	70	62%
TOTAL DAYS	3903	1986	49%

Summary Statements

- Less Time
- Less Money
- Less Paper
- Better Data
- Better Distribution of Data
- **EQUALS**
  - Better management of our state forests

Summary Statements

- What We Learned– forestry management planning is a long process
- GIS Wow Moment
- Separating into groups worked well

Acknowledgements

Commissioner Amey W. Marrella
Deputy Commissioner Susan Frechette
Bureau Chief Bill Hyatt
Guests:

Jeff Ward, CAES

Tom Worthley, Uconn

Howie Sternberg, CT DEP, OIM

Mike Beauchene, CT DEP, IWARD

Neal Hagstrom, CT DEP, BNR

Naomi Davidson, CT DEP, Communications

Katie Lotas, CT DEP, BNR (seasonal)
Brian Florek, CT DEP, Land Acquisition
Sheila Hoefle, CT DEP, BNR
Nancy Lent, CT DEP, Financial Services

Karl Wagener, CEQ

George Purple, CT DEP Materials Mgt.
David Irvin, CT DEP, BNR